U. S. Geological Survey
OPEN FILE REPORT 76-589
This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

MAP OF LANDSLIDES IN COASTAL PLAIN DEPOSITS OF THE FRANCONIA AREA, FAIRFAX COUNTY, VIRGINIA

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

S.F. Obermeier & Kurt Hollocher
1976

EXPLANATION OF MAP UNITS

The areal extent of all landslides mapped includes all the materials interpreted as having undergone large distortions and displacements during failure. Three types of landslides were recognized; rotational slumps, planar block glides, and combinations of these two. Schematic representations of the first two types of landslides are shown below (Varnes, 1958). The map presents three categories of landslides: Definite, Probable, and Possible. The map also shows areas of creep, and sites where seeps are located.

—— Definite Landslide: Delineates areas where sliding has definitely taken place, based on topographic and/or geologic evidence, verified in the field. Typical topographic evidence for a slump is a bulge (toe of slump) beneath a scarp (crown of slump). Principal geologic evidence for a glide block is the displaced topographic position of Upland Gravel deposits. Evidence of creep, without topographic or geologic evidence, is not considered sufficient to establish a Definite Landslide.

- - - Probable Landslide: Delineates areas where sliding has probably taken place, based primarily on topographic evidence such as a bulge beneath a scarp. Field evidence for this category is less distinct than for a Definite Landslide. Evidence of creep such as tilted trees was used to assist in identification of Probable Landslides, but only in conjunction with other topographic evidence.

····· Possible Landslide: Delineates areas where sliding has possibly taken place, based primarily on topographic evidence. Field evidence is commonly indistinct, either because of the age of the slide, or because of modification of the land by man. Evidence of creep was used often to help identify a Possible Landslide, but only in conjunction with other topographic evidence.

—·—·— Areas of Creep: Delineates areas where creep is manifested by the tilting or bending of trees. In many areas mapped only the large trees were tilted or bent, and the young trees were growing vertically.

Seeps: Delineates locations where seeps were in evidence on the ground surface.

NOTE

Landslide and creep boundaries are inferred somewhat, and information given is intended as a general guide. This map cannot be used as a substitute for detailed geologic and engineering investigations to establish design and construction criteria for specific sites.

The presence of past landsliding and creep must not be interpreted as implying that existing structures built on these deposits will necessarily experience distress. Many structures built on landslide deposits and areas of creep are performing satisfactorily.

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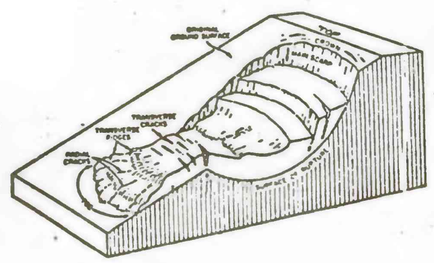
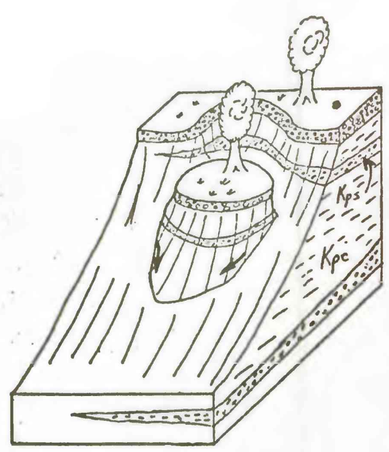


ROTATIONAL SLUMP



PLANAR GLIDE BLOCK

FRANCONIA AREA LANDSLIDE TYPES

(after Varnes, 1958)